



# UNITED STATES PATENT AND TRADEMARK OFFICE

MN

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,013	09/05/2003	Subhasish Mitra	ITL.0971US (P16171)	8151
21906	7590	05/14/2007	EXAMINER	
TROP PRUNER & HU, PC			CHUNG, PHUNG M	
1616 S. VOSS ROAD, SUITE 750			ART UNIT	
HOUSTON, TX 77057-2631			PAPER NUMBER	
			2117	
			MAIL DATE	
			DELIVERY MODE	
			05/14/2007	
			PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/656,013

Applicant(s)

MITRA ET AL.

Examiner

Phung My Chung

Art Unit

2117

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                 | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1-3, 9-10, 14 and 19-20, the phrase "at the same time" is not clear as to what it meant, for example, claim 1, lines 2-3, "adding...at the same time" is not clear whether it's referred to "each circuit that can produce an unknown logic value at the same time" or "adding ... and each circuit can produce...at the same time"? Appropriate correction is required.

As per claim 16, lines 2-3, "a plurality of exclusive OR gates arranged...unknown logic values" is not clear how these exclusive OR gates are arranged and how they handle any number of scan chains with unknown logic values. Appropriate correction and/or clarification is required.

As per claim 17, line 1, "that can handle any number of errors..." is not clear how it handle any number of error?

As per claims 4-8, 11-15, 18 and 21-25, these claims are also rejected because they dependent upon the rejected base claims.

### ***Claim Objections***

2. Claims 1-3, 9-11, 14, 17 and 19-20 are objected to because of the following informalities:

Art Unit: 2117

As per claims 1-3, 9-11 and 20, line 2, claims 10, 14 and 19, line 3 and claim 17, line 1, "can" a positive term should be used. Appropriate correction is required.

As per claim 9, line 1, "the process" should be changed to - - a process --.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitra et al ("An efficient Response Compaction Techque for Test Cost Reduction" IEEE 04/2002, paper 11.2, pages 311-320).

As per claim 16, Mitra et al disclose a response compactor, comprising:

A plurality of exclusive OR gates arranged to handle any unknown logic values.

(See pg. 318, section 3.4. Testing the Compactor Circuit and pg. 320, section 6.

Conclusions).

As per claims 17-18, Mitra et al further disclose that the compactor can handle any number of errors in the same scan cycle (pg. 320, section 6. Conclusions).

As per claims 1-8, 9-15 and 19-25, these method claims are rejected under similar rationale as set forth in claims 16-18. (See pg. 313, col. 2, pg. 314, col. 1, paragraph 7, pg. 318, section 3.4. Testing the Compactor Circuit, and pg. 320, section 6. Conclusions).


Art Unit: 2117

5. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung My Chung whose telephone number is 571-272-3818. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-jacques can be reached on 571-272-6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Phung My Chung  
Primary Patent Examiner  
Art Unit 2117